AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

less) base stations may locate within 80 km (50 miles) of the center of Buffalo. The following coordinates shall be used for the centers of these areas (coordinates are referenced to North American Datum 1983 (NAD83)):

Buffalo, NY.	42° 52′ 52.2″ North latitude. 78° 52′ 20.1″ West longitude.
Cleveland, OH.	41° 29′ 51.2″ North latitude. 81° 41′ 49.5″ West longitude.
Detroit, MI.	42° 19′ 48.1″ North latitude. 83° 02′ 56.7″ West longitude.

(d) Mobile operation shall be confined to within 80 km (50 miles) of the centers of Detroit, Cleveland, or Buffalo.

[52 FR 6156, Mar. 2, 1987, as amended at 54 FR 38681, Sept. 20, 1989; 58 FR 31476, June 3, 1993; 58 FR 44957, Aug. 25, 1993; 60 FR 37269, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 18929, Apr. 17, 1997; 63 FR 68965, Dec. 14, 1998]

§ 90.275 Selection and assignment of frequencies in the 421–430 MHz band.

Applicants must specify the frequencies in which the proposed system will operate pursuant to a recommendation by a frequency coordinator certified for the pool in which the requested frequency is assigned.

[62 FR 18932, Apr. 17, 1997]

§ 90.279 Power limitations applicable to the 421–430 MHz band.

(a) Base station authorizations in the 421–430 MHz band will be subject to Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limitations as shown in the table below. ERP is defined as the product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction. EAH is calculated by subtracting the Assumed Average Terrain Elevation (AATE) as listed in table 7 of § 90.619 from the antenna height above mean sea level.

LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO EFFECTIVE ANTENNA HEIGHTS (EAH) OF BASE STATIONS IN THE 421–430 MHz BAND

Effective antenna height (EAH) in meters (feet)	Maximum effective radiated power (ERP) (watts)
0–152 (0–500)	250
Above 152–305 (above 500–1000)	150
Above 305–457 (above 1000–1500)	75
Above 457–610 (above 1500–2000)	40
Above 610–762 (above 2000–2500)	20
Above 762–914 (above 2500–3000)	15
Above 914–1219 (above 3000–4000)	10
Above 1219 (above 4000)	5

(b) The maximum transmitter power output that will be authorized for control stations is 20 watts.

[52 FR 6157, Mar. 2, 1987, as amended at 58 FR 44957, Aug. 25, 1993]

§ 90.281 Restrictions on operational fixed stations in the 421–430 MHz band.

(a) Except for control stations, operational fixed facilities will not be authorized in the 421–430 MHz band. This does not preclude secondary fixed tone signaling and alarm operations authorized in § 90.235.

(b) Control stations associated with one or more mobile relay stations will be authorized only on the assigned frequency of the associated mobile station. Use of a mobile service frequency by a control station of a mobile relay system is subject to the condition that harmful interference shall not be caused to stations of licensees authorized to use the frequency for mobile service communications.

[52 FR 6158, Mar. 2, 1987, as amended at 54 FR 38681, Sept. 20, 1989]

§ 90.283 [Reserved]

Subpart L—Authorization in the Band 470–512 MHz (UHF–TV Sharing)

§ 90.301 Scope.

This subpart governs the authorization and use of frequencies by land mobile stations in the band 470–512 MHz on a geographically shared basis with Television Broadcast stations. Under this special sharing plan, different frequencies are allocated depending on

the geographic urban area involved as fully detailed in the following rule sections.

[43 FR 54791, Nov. 22, 1978, as amended at 62 FR 18932, Apr. 17, 1997]

§ 90.303 Availability of frequencies.

Frequencies in the band 470–512 MHz are available for assignment in the urbanized areas listed below. The specific frequencies available are listed in § 90.311 of this part. Note: Coordinates are referenced to North American Datum 1983 (NAD83).

Urbanized area	Geographic center		Channel	Frequencies (megahertz)
	North latitude	West longitude		
Boston, MA	42° 21′ 24.4″	71° 03′ 23.2″	14	470–476
			16	482–488
Chicago, IL[3]	41° 52′ 28.1″	87° 38′ 22.2″	14	470–476
			15	476–482
Cleveland, OH[4]	41° 29′ 51.2″	81° 41′ 49.5″	14	470–476
			16	482–488
Dallas/Fort Worth, TX	32° 47′ 09.5″	96° 47′ 38.0″	16	482–488
Detroit, MI[5]	42° 19′ 48.1″	83° 02′ 56.7″	15	476–482
			16	482–488
Houston, TX	29° 45′ 26.8″	95° 21′ 37.8″	17	488–494
Los Angeles, CA[6]	34° 03′ 15.0″	118° 14′ 31.3″	14	470–476
			20	506–512
Miami, FL	25° 46′ 38.4″	80° 11′ 31.2″	14	470–476
New York/N.E. NJ	40° 45′ 06.4″	73° 59′ 37.5″	14	470–476
			15	476–482
Philadelphia, PA	39° 56′ 58.4″	75° 09′ 19.6″	19	500–506
			20	506–512
Pittsburgh, PA	40° 26′ 19.2″	79° 59′ 59.2″	14	470–476
			18	494–500
San Francisco/Oakland, CA	37° 46′ 38.7″	122° 24′ 43.9″	16	482–488
			17	488–494
Wash., DC/MD/VA	38° 53′ 51.4″	77° 00′ 31.9″	17	488–494
			18	494–500

[3] In the Chicago, IL, urbanized area, channel 15 frequencies may be used for paging operations in addition to low power base/mobile usages, where applicable protection requirements for ultrahigh frequency television stations are met.
[4] Channels 14 and 15 are not available in Cleveland, OH, until further order from the Commission.
[5] Channels 15 and 16 are not available in Detroit, MI, until further order from the Commission.
[6] Channel 16 is available in Los Angeles for use by public safety users.

[63 FR 68965, Dec. 14, 1998]

§ 90.305 Location of stations.

(a) The transmitter site(s) for base station(s), including mobile relay stations, shall be located not more than 80 km. (50 mi.) from the geographic center of the urbanized area listed in § 90.303.

(b) Mobile units shall be operated within 48 km. (30 mi.) of their associated base station or stations. Such units may not be operated aboard aircraft in flight except as provided for in § 90.315(i).

(c) Control stations must be located within the area of operation of the mobile units.

(d) Base and control stations shall be located a minimum of 1.6 km. (1 mi.) from local television stations operating on UHF TV channels separated by 2, 3, 4, 5, 7, and 8 TV channels from the television channel in which the base station will operate.

§ 90.307 Protection criteria.

The tables and figures listed in § 90.309 shall be used to determine the proper power (ERP) and antenna height of the proposed land mobile base station and the proper power (ERP) for the associated control station (control station antenna height shall not exceed 31 m. (100 ft.) above average terrain (AAT)).

(a) Base stations operating on the frequencies available for land mobile use in any listed urbanized area and having an antenna height (AAT) less than 152 m. (500 ft.) shall afford protection to co-channel and adjacent channel television stations in accordance with the values set out in tables A and E of this subpart, except for Channel 15 in New York, NY, and Cleveland, OH,